Vermont Department of Health
Cardiovascular Disease and Stroke Plan

Introduction

Despite the substantial decline in mortality during the past several decades, coronary artery disease and stroke are the first and third leading causes of death, respectively, among men and women in Vermont and in the United States. Since 1990, an average of 1,159 Vermonters have died annually from coronary artery disease and an average of 337 have died from stroke.

The coronary artery disease mortality rate was statistically higher for men than women from 1991 to 2000, while there was no significant difference in the stroke mortality rate.

In Vermont, hospitalizations for cardiovascular disease declined by 5.3 percent from 1997 to 1999. Total annual hospital charges for heart disease and stroke were $64.4 million and $15.7 million, respectively, in 1990: these represent an increase of nearly 12.9 percent for coronary artery disease and 4.3 percent for stroke from the previous year.

The Vermont legislature amended 18 V.S.A. §11 to include language addressing cardiovascular disease. The legislation required the Department of Health to form a coalition to be known as “CHAMPPS” (Coalition for Healthy Activity, Motivation, and Prevention Programs) and to produce a cardiovascular disease and stroke state health plan, due by December 1, 2004. CHAMPPS began meeting in 2002, and devoted most of their time to identifying and prioritizing objectives and actions for inclusion in the plan. This report details the results of the CHAMPPS coalition work.

Risk Factors

Most people with cardiovascular disease share multiple common risk factors and lifestyle behaviors. Behaviors that contribute to the development of risk factors, partly by causing obesity, include adverse dietary patterns and physical inactivity. Social and environmental conditions that may determine such behavioral patterns, in turn, include education and income, cultural influences, family and personal habits, and opportunities to make favorable choices. Tobacco use, hypertension, high cholesterol, diabetes, physical inactivity, and poor nutrition are established risk factors for cardiovascular disease. The risk of death from all causes is increased by 40 percent for those with two of these risk factors compared to those with no risk factors.

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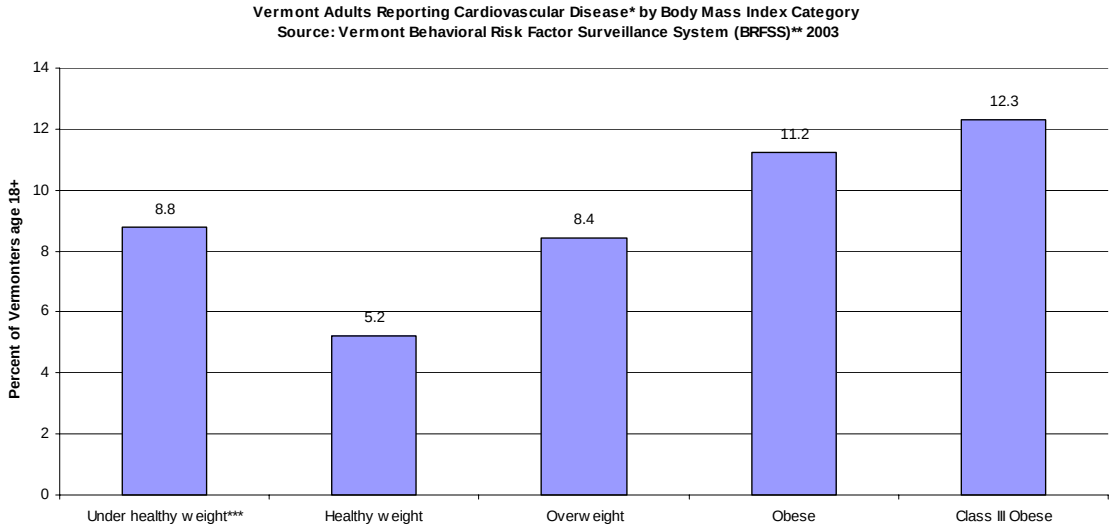

Several of these lifestyle behaviors – tobacco use, physical inactivity, and poor nutrition – are also risk factors for other serious chronic conditions, and are the actual causes of 35 percent of all death in the United States.

Table 2. Actual Causes of Death in the United States in 1990 and 2000

Actual Cause	No. (%) in 1990*	No. (%) in 2000
Tobacco	400 000 (19)	435 000 (18.1)
Poor diet and physical inactivity	300 000 (14)	400 000 (16.6)
Alcohol consumption	100 000 (5)	85 000 (3.5)
Microbial agents	90 000 (4)	75 000 (3.1)
Toxic agents	60 000 (3)	55 000 (2.3)
Motor vehicle	25 000 (1)	43 000 (1.8)
Firearms	35 000 (2)	29 000 (1.2)
Sexual behavior	30 000 (1)	20 000 (0.8)
Illicit drug use	20 000 (<1)	17 000 (0.7)
Total	**1 060 000** (50)	**1 159 000** (48.2)

*Data are from McGinnis and Foege.[1] The percentages are for all deaths.

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Overweight, obesity, and extreme obesity continue to increase dramatically among Vermont adults. Steps taken to address the prevention of cardiovascular disease will improve outcomes for other chronic conditions and result in a healthier population.

Interrelationships Between Various Chronic Diseases and Modifiable Risk Factors*, United States

Adapted from: Brownson, R.C., et al. *Chronic Disease Epidemiology and Control.* 1998;4.

	Disease					
Modifiable Risk Factors	Cardiovascular	Cancer	COPD	Diabetes	Asthma	Arthritis
Tobacco Use	+	+	+	+	+	
Alcohol Use	+	+		+		
High cholesterol	+			+		?
High blood pressure	+			+		?
Nutrition	+	+		+		?
Physical activity	+	+		+		+
Obesity	+	+		+	+	+
Environmental tobacco smoke	?	+	+		+	

Addressing cardiovascular disease means both preventing the onset of disease (primary prevention) and managing those already affected to reduce negative health outcomes (secondary and tertiary prevention). While individual behavior choice plays a critical role in disease prevalence and management, the health care system also needs to be engaged in creating opportunities for a healthy lifestyle.

The Vermont Blueprint for Health

The Vermont Blueprint for Health lays out a framework for improving the health of all Vermonters and reducing the morbidity and mortality associated with cardiovascular and other chronic disease. Recognizing that addressing complex public health issues requires action on multiple levels, the Blueprint calls for action in five areas:

Self-management: Actions to develop informed, activated people who are prepared to manage their own health care. Sometimes called “empowered” consumers, they use effective self-management strategies and take on a central role in their health care.

Community: Mobilization of community resources to support healthy behaviors as the easiest choice. Community programs can and should support or expand a health systems care for people with, or at risk for, chronic disease

Provider practice: Measures to promote a prepared, proactive practice team through decision support – treatment systems based on explicit, proven guidelines – and delivery system design – transforming a system that is

essentially reactive to one that is proactive and focused on keeping a person as healthy as possible.

Health systems: Creation of a culture, organization and mechanisms that promote safe, high quality health care.

Information technology: Information systems, with ready access to key data on individual patients as well as populations of patients, need to be in place to support consumers, providers, the community and health system.

The objectives and action steps presented in this plan have been formatted to fit into the Vermont Blueprint for Health model, and provide a framework within which agencies, organizations and individuals can work together to improve outcomes related to cardiovascular disease.

Objectives and Strategies

Objective 1:
Increase the number of providers delivering care according to Recommendations for Management of Diabetes in Vermont, measured by participation in VPQHC collaboratives

Provider practice
1. Support the implementation of the Recommendations for Management of Diabetes in Vermont through provider participation in the VPQHC Chronic Care Collaborative.
2. Include screening and prevention of pre-diabetes and diabetes risk factors in pediatric provider tool kit

Health systems
1. Use the Recommendations for Management of Diabetes in Vermont as consensus guidelines for diabetes care supported by Blue Cross/Blue Shield, MVP, Cigna, and the Office of Vermont Health Access (Medicaid) and meeting the Rule 10 requirements for treatment protocols. (Current publication of the Recommendations includes a statement from BISHCA and all of the plans insignia supporting this)
2. Promote the distribution of educational materials to providers and patients consistent with the Recommendations for Management of Diabetes in Vermont.

Objective 2:
Increase the number of people who can state the primary risk factors for CVD; are aware of their blood pressure, cholesterol and fasting glucose

levels; are aware of what a healthy weight is and what their own weight is; and are working to lower or maintain their current risk level

Provider practice

1. Encourage health care providers to routinely measure body mass index (BMI) in all adults and children.
2. Encourage all providers to educate patients on what a healthy weight is in a non judgmental format.
3. Support screening for CVD and pre-diabetes risk factors according to national guidelines
4. Provide trainings to health care providers on current screening and treatment recommendations across all age groups..
5. Develop a tool kit of resources for screening, education on prevention, assessment, treatment, and referral.
6. Encourage providers to counsel patients on healthy lifestyle practices to reduce or prevent obesity including eating a well balanced diet, increasing physical activity and reducing sedentary time.

Health systems

1. Encourage health care plans to provide reimbursement for counseling on weight and programs to address weight status.
2. Disseminate BMI screening tool to providers statewide.

Objective 3:
Increase the number of hospitals delivering stroke care according to national guidelines

Health systems

1. Assess Vermont hospitals' current acute treatment and discharge protocols for stroke
2. Identify champions at Vermont hospitals to lead, develop and mobilize teams to implement treatment and discharge guidelines for patients in acute care hospitals
3. Set care team protocols at acute hospitals to ensure that patients are initiated and discharged on appropriate medication and with risk-modification counseling
4. Establish a Primary Stroke Center at acute care hospitals following the recommendations of the Brain Attack Coalition for an Acute Stroke Treatment Program (ASTP)
5. Implement American Heart Association Get with the Guidelines – Stroke program at acute care hospitals including on-line patient management tool for guidelines-based care in acute ischemic stroke management and secondary prevention

Objective 4: Increase the number of hospitals delivering care according to the American Heart Association "Get with the Guidelines"

Health systems

1. (See Action item #5 under stroke care objective.)
2. Implement American Heart Association Get with the Guidelines – Coronary Artery disease (CAD) hospital-based program at acute care hospitals, including:
    a. Designating a champion at hospitals
    b. Building implementation teams at hospitals
    c. Implementing standing orders and/or protocols that are in accordance with the current AHA/American College of Cardiology prevention guidelines for coronary artery disease
    d. Submit baseline data from patients with coronary artery disease via the web-based patient management tool
3. Integrate AHA Get with the Guidelines Stroke and CAD into the Vermont Chronic Care Collaborative

Objective 5:
Increase the proportion of adults aged 20 years and older who are aware of the early warning symptoms and signs of a heart attack or stroke and the importance of accessing or performing rapid emergency care (CPR) either for themselves or a witnessed out-of-hospital event by calling 911

Community

1. Increase the number of community-based CRP classes offered
2. Promote awareness through media campaigns

Objective 6:
Increase the proportion of persons aged 2 years and older who follow the Dietary Guidelines for Americans, especially the recommendations to choose a variety of grains daily, especially whole grains; choose a variety of fruits and vegetables daily (at lease 5 a day); choose a diet that is low in saturated fat and cholesterol and moderate in total fat; and choose and prepare foods with less salt

Community

1. Establish nutrition policies in schools that promote healthy eating through classroom lessons and an environment that supports healthy choices (e.g., vending machines, cafeterias, school stores, fundraising events)
2. Increase the number of grocery stores, restaurants and fast food establishments that provide "point of purchase" information promoting USDA/DHHS dietary guidelines through 5-a-Day messages, food guide pyramids and menu displays.

3. Increase the number of grocery and convenience stores, restaurants and fast food establishments that provide heart-healthy choices, as indicated on their menus (e.g., low-fat milk, fruits, vegetables)..
4. Promote use of the WIC farm to family program and seniors' farmers market program. Increase access to and utilization of farmers markets for all populations.
5. Develop common messages for nutrition that can be used across all nutrition education programs; promote the use of these messages, including media.
6. Develop a state nutrition action plan in collaboration with state nutrition agency representatives.

Objective 7:
Reduce the proportion of children and youth who view TV, play video games or use computers 2 or more hours on a school day

Community
1. Increase the number of programs that encourage choosing healthy behaviors
2. Develop common messages promoting the benefits of an active lifestyle

Objective 8:
Increase the proportion of trips made by walking and/or bicycling (including skateboarding, rollerblading and scootering) across all age groups

Community
1. Provide education to municipal officials such as planning commissions and select boards about the connection between land use and transportation patterns and prevalence of obesity.
2. Provide resources and support to local and regional organizations developing initiatives that encourage individuals to choose bicycling and walking for at least some of their trips.
3. Work collaboratively with other state agencies on developing and supporting efforts that will encourage school age children to walk or bicycle to school (know nationally as Safe Routes to Schools programs).
4. Support legislative efforts that will provide funding to construct infrastructure (i.e. sidewalks , crosswalks, shared-use paths, bicycle lanes, bicycle parking) that will facilitate bicycling and walking.
5. Work with employers to develop programs that encourage walking and bicycling to work as well as providing opportunities for physical activity during the work day.

Objective 9:

Increase the number of providers who counsel patients on tobacco use cessation and refer to local community resources

Provider practice
1. Provide tools for referral to tobacco cessation resources such as the fast fax referral form for the Vermont Quit Line or cessation prescription pads with contact information for the local cessation

Health systems
2. Support hospital based cessation programs throughout the state.
3. Support the work of the Tobacco Control Program

Objective 10:
Reduce the initiation of tobacco use among children and adolescents

Community
1. Support prevention programs such Our Voices Xposed, Vermont Kids Against Tobacco…)
2. Support integration of media literacy throughout the curriculum

Objective 11:
Increase the proportion of schools that provide comprehensive school health education incorporating the Vermont Framework of Standards and Learning Opportunities

Community
1. Provide professional development and technical assistance to schools interested in developing a comprehensive health education program aligned with VT standards.
2. Make available the publication Health Education Curriculum Guidelines and Assessment to all schools in hard-copy and on the DOE website.
3. Establish a cadre of health educators available to provide technical assistance and mentoring to schools in their region interested in establishing a comprehensive health education program

Objective 12:
Increase daily physical activity for all children, youth and adults (across all age groups)

Community
1. Work with schools to establish policies and programs that promote lifetime physical fitness, and an environment that supports physical activity for all

ages (e.g. facilities open to community, after school physical fitness programs, increased transportation availability).
2. Develop common messages for the Vermont public that provide recommendations for age appropriate physical activity
3. Work with communities to develop plans for improving access and opportunities to increase physical activity across all age groups

Objective 13:
Increase the number of employers offering worksite-based employee health evaluation and health improvement opportunities

Community
1. Promote the education of employers to adopt and use "ScoreHealth," an RN administered questionnaire that provides a framework for a person to develop a plan to improve health status.

Healthy Vermonters 2010
Heart Disease and Stroke Objectives

Reduce coronary heart disease deaths
VT 2002: 163 per 100,000
Goal: 166 per 100,000 people

Reduce stroke deaths
VT 2002: 52 per 100,000 people
Goal: 48 per 100,000 people
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Reduce the percentage of adults with high blood pressure
VT 2003: 23% (age 20+)
Goal: 16% (age 20+)

Reduce the percentage of adults who smoke cigarettes
VT 2003: 20% (age 18+)
Goal: 12% (age 18+)

Healthy Vermonters 2010 also includes other cardiovascular disease objectives in the areas of access to health care, physical activity, nutrition, respiratory diseases and tobacco.